

Appl. No. : 09/185,876
Filed : November 3, 1998

SUMMARY OF TELEPHONIC INTERVIEW

Identification of Claims Discussed

Claim 1 was discussed.

Identification of Prior Art Discussed

The Helf reference (U.S. Patent No. 5,550,924) was discussed.

Summary of Discussion

During the interview, varying the gain according to the amplitude envelope was discussed and it is Applicant's understanding that the Examiner would conduct a new search.

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REMARKS

The foregoing amendments and the following comments are responsive to the objections and rejections set forth by the Examiner in the August 26, 2003 Office Action.

Claims 1-71 are pending in this application. The Examiner rejected Claims 1-71. In particular, the Examiner rejected Claims 1-71 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,550,924 ("the Helf patent").

Applicant would like to thank Examiner Opsasnick for the interview extended to Applicant's counsel of record, John R. King, on January 20, 2004. During the interview, varying the gain according to the amplitude envelope was discussed and it is Applicant's understanding that the Examiner would conduct a new search.

Accordingly, Applicant has amended Claims 9, 17, 34, 57, 64, and 67 along the lines discussed in the interview. By this amendment, Applicant has amended Claims 9, 17, 34, 41, 42, 45, 47, 55, 57, 62, 64, and 67, and canceled Claims 21, 53, 54, 56, and 68. Reconsideration of the pending claims, as amended, is therefore respectfully requested.

THE SPECIFICATION

Applicant has amended the specification to conform to the numbering and structure set forth in Figure 8A and Figure 4. The second reference to curve 802 on page 19, line 5 was changed from "curve 802" to "curve 808". The reference to "speech enhancer 408" on page 19, line 6 was changed to "speech enhancer 400".

Applicant has amended the specification to conform to the numbering and structure set forth in Figure 8B. The reference to curve 802 on page 19, line 14 was changed from "curve 802" to "curve 810".

Applicant has amended the specification to conform with the numbering and structure set forth in Figure 10. The paragraph beginning on page 23, line 18 was amended to include resistor 1022. The description of resistor 1022 was missing from the specification but resistor 1022 is included in the originally submitted Figure 10.

Applicant has amended the paragraph beginning on page 24, line 1 to correct a grammatical error. The second occurrence of the phrase "second terminal of the" has been deleted from page 24, lines 1 and 2.

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Applicant respectfully submits that no new matter is being introduced by way of this Amendment and requests that the foregoing Amendment to the specification be entered and made of record.

DRAWING CORRECTIONS

Figures 1C, 9A, 9B, and 9C have been amended as set forth in the attached document entitled "SUBMISSION OF SUBSTITUTE DRAWINGS FOR APPROVAL BY EXAMINER."

In Figure 1C, a dashed box incorrectly surrounded reference items 108 and 110 and the dashed box was incorrectly labeled 107. Applicant has removed the dashed box and the reference indicator 107. There is no reference to reference number 107 with respect to Figure 1C in the specification.

In Figures 9B, 9C, and 9D, the reference indicator 912 was inadvertently left off of the combiner. Applicant has added reference indicator 912 to the combiner in Figures 9B, 9C, and 9D. The originally filed specification supports the addition of the reference indicator in Figure 9B in the paragraph beginning on page 20, line 27. The originally filed specification supports the addition of the reference indicator in Figure 9C in the paragraph beginning on page 21, line 14 and the paragraph beginning on page 21, line 22. The originally filed specification supports the addition of the reference indicator in Figure 9D in the paragraph beginning on page 22, line 9.

Applicants respectfully submit that no new matter is introduced by the proposed drawing changes and therefore respectfully request the Examiner to approve the drawing changes.

REJECTION OF CLAIMS 1-71 UNDER 35 U.S.C. § 102(b)

The Examiner rejected Claims 1-71 under 35 U.S.C. § 102(b) as being anticipated by Helf. In view of the following discussion, Applicant respectfully traverses this rejection.

Helf appears to teach enhancing speech by suppressing constant background noise. Helf appears to apportion the sampled input signal into digital frames and to filter the frames to remove noise. Helf appears to fast Fourier transform a window of

these digital frames and to modify the magnitude of the spectral components of the transformed signal. See column 3, line 53 through column 4, line 49, and Figure 1.

Claims 1, 5, 9, 17, 55, 64, and 67

Helf does not appear to disclose a speech expander where the speech expander amplifies the filtered signal based on the amplitude envelope of the filtered signal. In addition, Helf does not teach combining at least a portion of the output of the speech expander with at least a portion of the speech input signal to generate the enhanced speech signal.

Because the reference cited by the Examiner does not disclose, teach or suggest the use of a speech expander where the speech expander amplifies the filter output signal according to a function of the envelope amplitude of the filter output signal, and a combiner which combines at least a portion of the expanded signal with at least a portion of the voice signal to produce an enhanced signal, Applicant asserts that Claims 1, 5, 9, 17, 55, 64, and 67 are not anticipated by Helf. Applicant therefore respectfully submits that Claims 1, 5, 9, 17, 55, 64, and 67 are patentably distinguished over the Helf reference and Applicant respectfully requests allowance of Claims 1, 5, 9, 17, 55, 64, and 67.

Claims 34 and 57

Helf does not appear to disclose a speech expander where the speech expander amplifies the filtered signal based on the amplitude envelope of the filtered signal.

Because the reference cited by the Examiner does not disclose, teach or suggest the use of a speech expander where the speech expander amplifies the filter output signal according to a function of the envelope amplitude of the filter output signal, Applicant asserts that Claims 34 and 57 are not anticipated by Helf. Applicant therefore respectfully submits that Claims 34 and 57 are patentably distinguished over the Helf reference and Applicant respectfully requests allowance of Claims 34 and 57.

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Claims 21, 53, 54, 56, and 68

By this amendment, Applicant has canceled Claims 21, 53, 54, 56, and 68 without prejudice or disclaimer. Accordingly, Applicants respectfully request the Examiner to withdraw the objection of Claims 21, 53, 54, 56, and 68 under 35 U.S.C. § 102(b) as being anticipated by Helf.

Claims 2-4

Claims 2-4, which depend from Claim 1, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

Claims 6-8

Claims 6-8, which depend from Claim 5, are believed to be patentable for the same reasons articulated above with respect to Claim 5, and because of the additional features recited therein.

Claims 10-16

Claims 10-16, which depend from Claim 9, are believed to be patentable for the same reasons articulated above with respect to Claim 9, and because of the additional features recited therein.

Claims 18-20, and 22-33

Claims 18-20, and 22-33, which depend from Claim 17, are believed to be patentable for the same reasons articulated above with respect to Claim 17, and because of the additional features recited therein.

Claims 35-52

Claims 35-52, which depend from Claim 34, are believed to be patentable for the same reasons articulated above with respect to Claim 34, and because of the additional features recited therein. Claims 41, 42, and 47 have been amended to correct an antecedent basis error. Claim 45 has been amended to correct the dependency.

Claims 58-63

Claims 58-63, which depend from Claim 57, are believed to be patentable for the same reasons articulated above with respect to Claim 57, and because of the additional features recited therein. Claim 62 has been amended to correct an antecedent basis error.

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Claims 65-66

Claims 65-66, which depend from Claim 64, are believed to be patentable for the same reasons articulated above with respect to Claim 64, and because of the additional features recited therein.

Claims 69-71

Claims 69-71, which depend from Claim 67, are believed to be patentable for the same reasons articulated above with respect to Claim 67, and because of the additional features recited therein.

REQUEST FOR TELEPHONE INTERVIEW

Pursuant to M.P.E.P. § 713.01, in order to expedite prosecution of this application, Applicant's undersigned agent of record hereby formally requests a telephone interview with the Examiner as soon as the Examiner has considered the effect of the arguments presented above. Applicant's agent can be reached at (949) 721-2988 or at the number listed below.

CONCLUSION

In view of the forgoing, the present application is believed to be in condition for allowance, and such allowance is respectfully requested. If further issues remain to be resolved, the Examiner is cordially invited to contact the undersigned such that any remaining issues may be promptly resolved. Also, please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: Jan 22, 2004

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